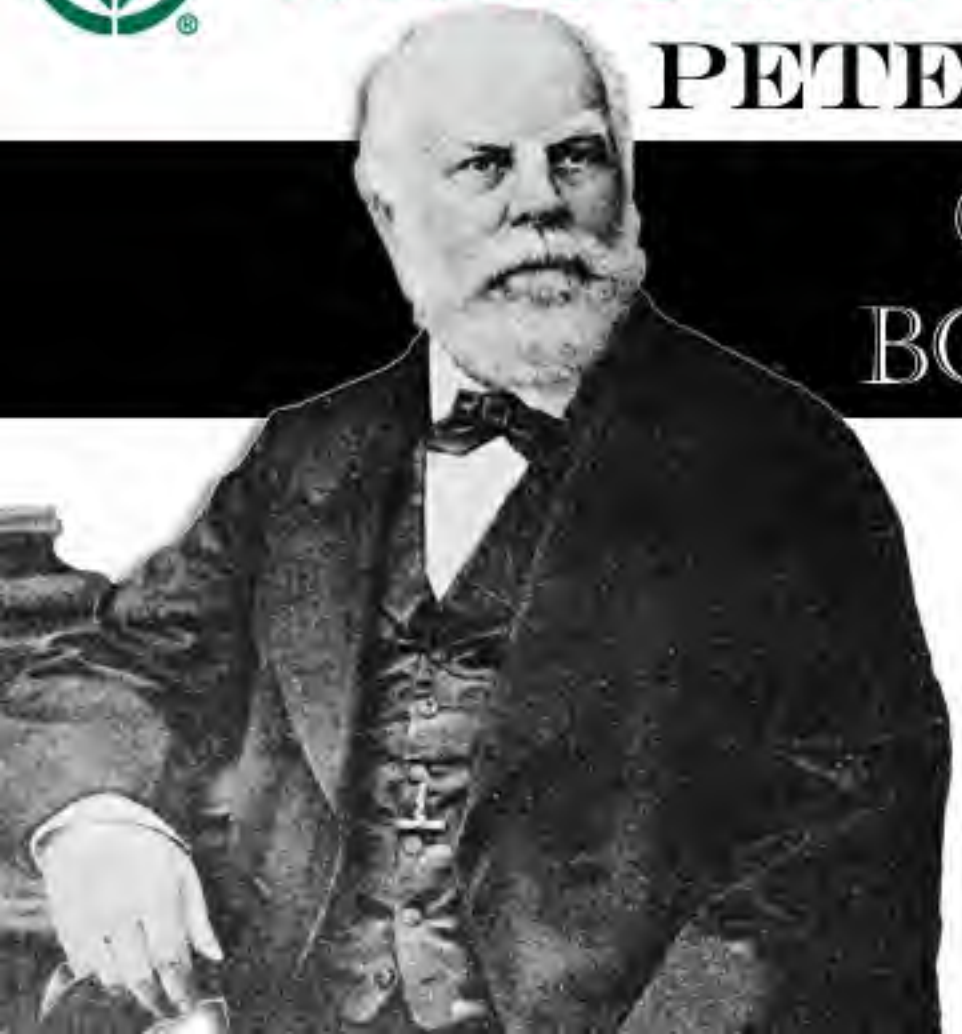
Missouri Botanical Garden
Peter H. Raven Library

George Engelmann Botanical Notebooks



Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

[illegible] from obtaining more than a few crystals, which are now deposited in the collection of the Smithsonian Institute; a few others are also in the hands of members of the party. We were travelling at the time by forced night marches with nearly worn out animals, seeking to gain a spring of water in a distant range of mountains. This desert was then entirely unexplored. I have but little doubt that more interesting materials are to be found at the same point.

The mountains of the former Territory of Utah promise a rich yield to the mineralogist. We know already of gold and silver ores in the east, west and south part of that district; of copper and lead ores in the south, and I have discovered the latter also in the centre of it; of specular iron ores and native sulphur in the Rocky Mountains and near Little Salt Lake; of rock salt in the mountains south-east of Utah Lake; of native alum near Salt Lake; of various other salts in the deserts; and of silicates, composing the granites, porphyries, diorites, trachytes, and lavas, nearly over the whole area.

The *Elæacrinus Kirkwoodensis* is nearly allied to *E.* (*Pentremites*) *melo*, from which it is distinguished by its much smaller size and less deeply excavated base. It also occupies a higher geological position.

Occurs in the St. Louis Limestone (Carboniferous) on the Pacific railroad near Kirkwood, St. Louis county, Missouri.

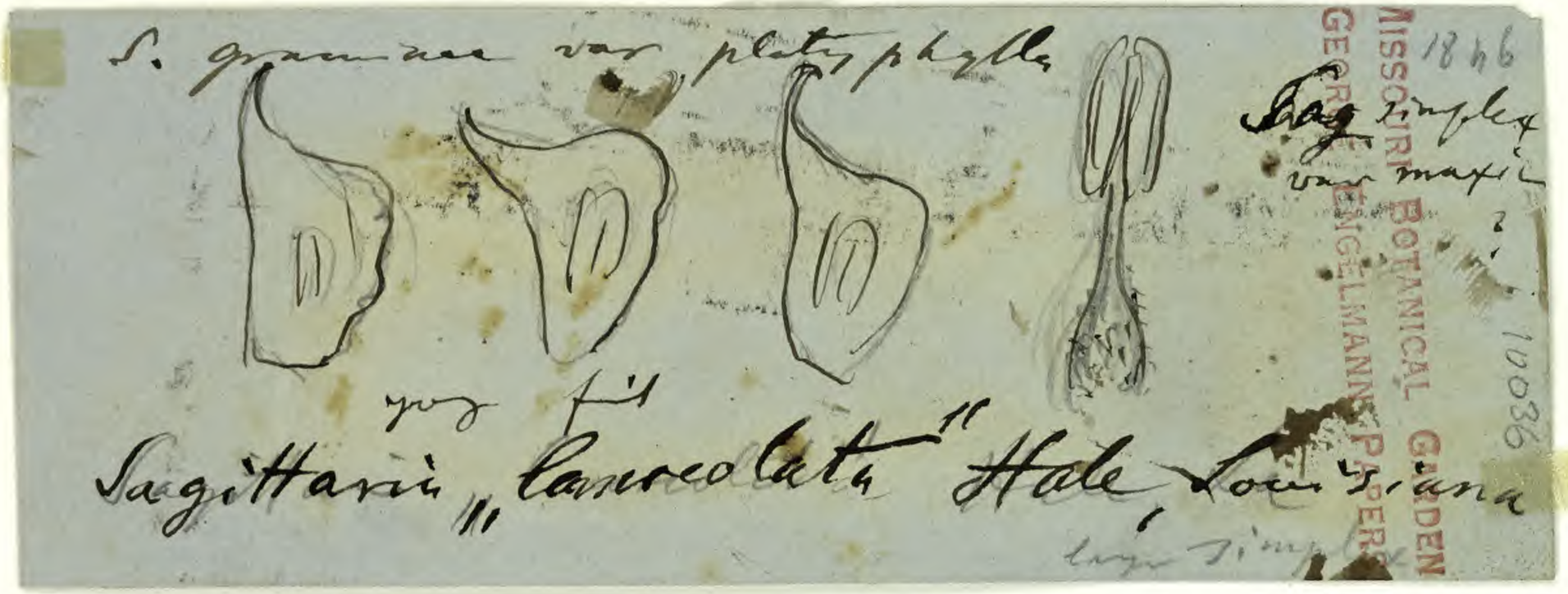
Sagittaria longiloba a/p.
or var of gramineea ?

100348

special benefit to India at large. The success of such an institution is of primary importance to the full development of forest conservancy in its most useful form, and no effort should be spared by the authorities to render the training imparted in it as complete and efficient as possible. On the whole we have reason to be satisfied with the good progress made by the Indian Forest Department in the past, so ably detailed in this Report, and to look forward with a prospect of still more rapid progress in the immediate future, since the establishment has now got into fair working order, and can turn its attention more thoroughly to its practical duties.

THE LATE MR. ROBERT ERSKINE BROWN.—The early death of this well-known land agent occurred on the 11th inst., at Edinburgh. Mr. Brown, who was in his fortieth year, had devoted himself to the advancement of agriculture from a very early age, and his extensive experience, as well as the thoroughly practical nature of his mind, caused him to be known as an authority on agricultural matters. In his knowledge of the management of forest trees he had few equals, and his "Book of the Landed Estate," published by Messrs. Blackwood, of Edinburgh, has taken high rank amongst literary productions of this character. Mr. Brown

reasons ascribed for so heavy a falling-off in the forest revenue, or surplus, amounting only to about £18,000 for that year, are, stagnation of trade at the seaports, with the prevalence of drought and famine in many inland districts, and the consequent short demand for timber and other forest produce. These are drawbacks from which every country in the world has recently suffered more or less; but with the advent of more prosperous times, the revenue from the Indian forests may be expected to increase much more rapidly than it has previously done. With the experience gained in the past, and the introduction of the most efficient system of management to suit the nature and wants of each district, greater results will be obtained, and financial success be no longer in doubt. However, we do not think it is at all desirable that other material objects should be overlooked in the hot haste to create a big yearly surplus. The efficient conservation of the forests from undue encroachment and deterioration is the first object to be accomplished, and when that is thoroughly secured, and the necessary planting and other improvements satisfactorily completed, a vast increase in the revenue derived from the forests will undoubtedly follow. The well-known beneficial influences which a duly balanced extent of forests has upon the general prosperity of



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tion of light.

The local [illegible] 30′ west of [illegible] as' range of [illegible] Circumstances prevented me from obtaining more than a few crystals, which are now deposited in the collection of the Smithsonian Institute; a few others are also in the hands of members of the party. We were travelling at the time by forced night marches with nearly worn out animals, seeking to gain a spring of water in a distant range of mountains. This desert was then entirely unexplored. I have but little doubt that more interesting materials are to be found at the same point.

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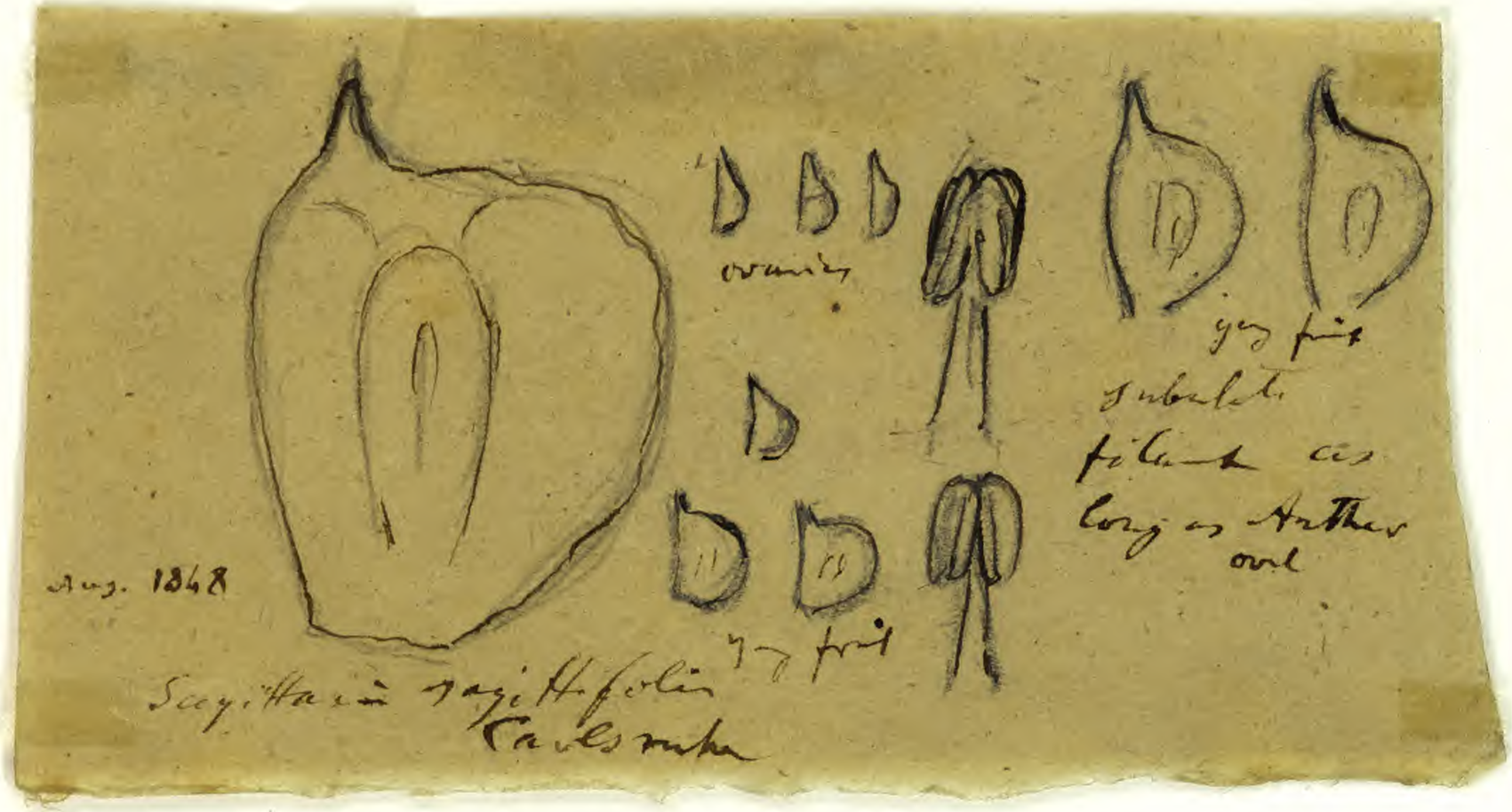


10038

interrupted descent and ascent took place from January to December, we find in 1862 some interruptions in the steps of that ladder. The electricity in February, 1862, is about four degrees higher than that of January, April somewhat higher than March, and July is the lowest instead of September in 1861. These trifling irregularities may be accounted for by differences in temperature and relative humidity, and by a greater number of thunderstorms in 1862. January of 1862, for instance, was so unusually rainy, that its relative humidity too was unusually high, diminishing thus electricity. But the general features of distribution of electricity throughout the year are apparent in both years, and we may in that respect divide the twelve months of each year into two or three groups. Computing the months which give the highest electricity and those which give the lowest in each year, we find that in both years the months of January, February, March, April, November and December exhibit the highest, and the months of May, June, July, August, September and October the lowest electricity. The first group gives

The aggregate monthly mean of	71.5	degrees of	electricity in	1861
and	74.6	"	"	" 1862
While the second group gives	29.0	"	"	" 1861
and	25.7	"	"	" 1862

[illegible] and the 1st

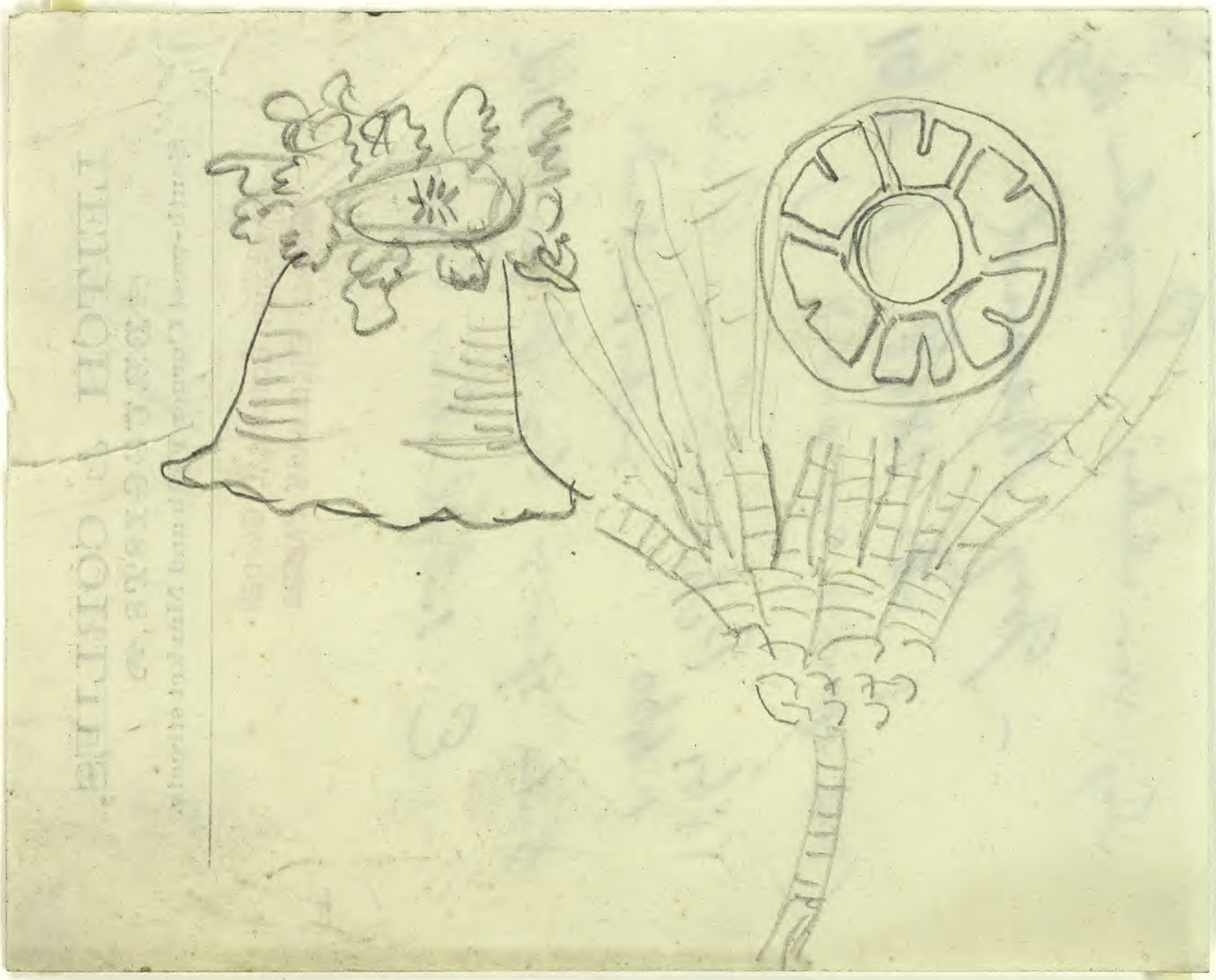
VI. The appearance of negative electricity was connected in

1861. No. times.	1862. No. times.	
30	32	with thunderstorms.
23	28	with rains without thunder and lightning.
20	4	with dry storms (without rain and without thunder and lightning).
4	3	with snow.
1	0	with fog.
78	67	

VII. *Relation of Rain and Snow to Electricity.*

Rain without thunderstorm was accompanied

	By Positive Electricity.		By Negative Electricity.		By no Electricity.	
	In 1861.	In 1862.	In 1861.	In 1862.	In 1861.	In 1862.
January.....	7	5	3	2	.....	2 .....
February	2	1	4	1	.....	.....
March						



Syn. variabilis Engelm.
= Gray Manual
1. ed. 1848. p. 461
(all species compared!)

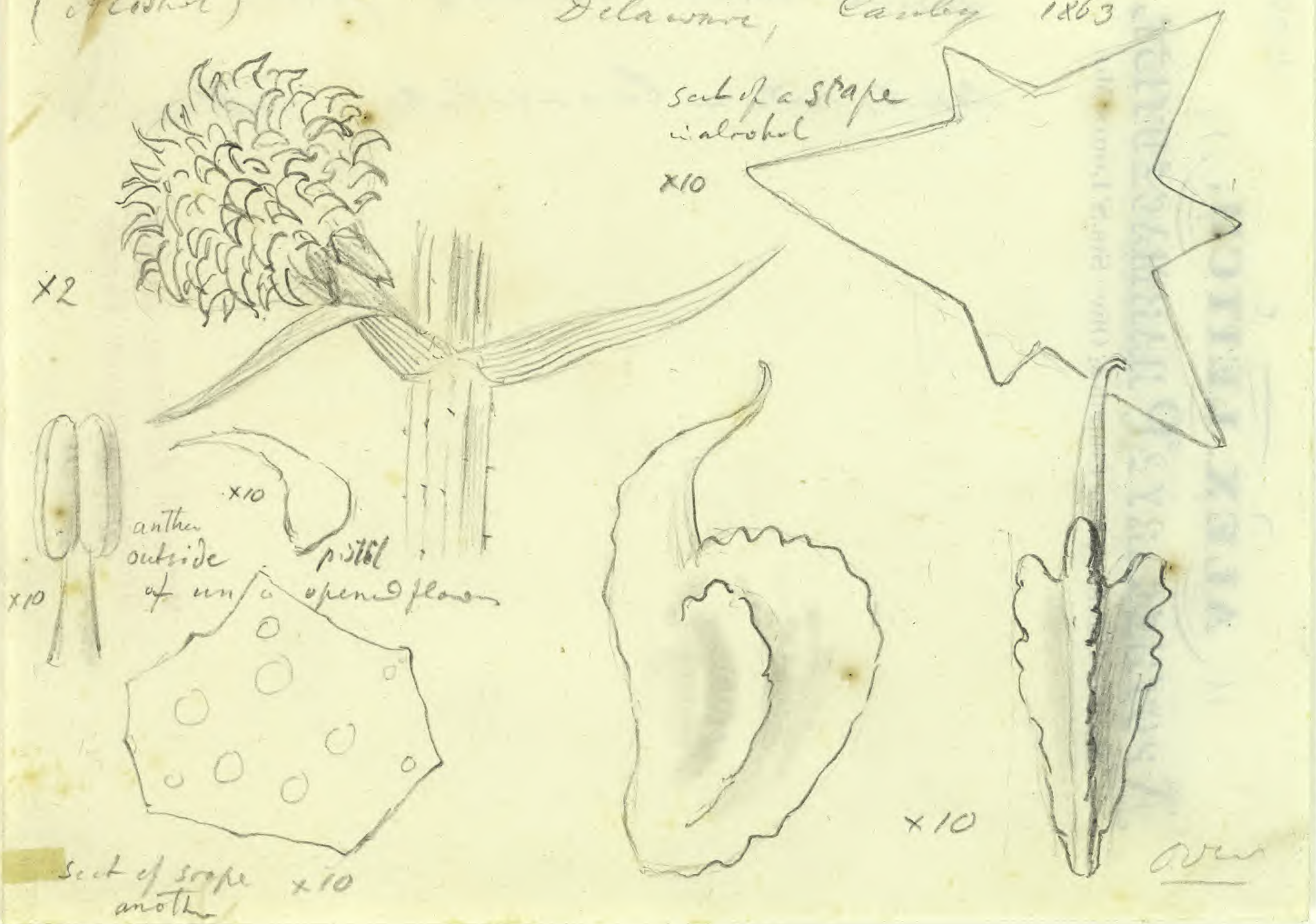
ibi Pelt. radorus Rich
p. 460 restituendus

but species by Gray's author
E. subulatus Eng.

May 21 1865

Sagittaria variabilis

(alcohol) Delaware, Canby 1863



10041

ALEX. LEITCH,

APOTHECARY & PHARMACEUTIST,

Marble Building Cor. Fourth & Olive Sts. St. Louis, Mo.

Send Court Circular
Mr. Engelmann
Mr. Engelmann
St. Louis Mo.

E. Tatnall writes from Wilmington Del. Sept 8 1860

My nephew brought me today 2 scapes of Sagittaria variabilis, every flower on which was entirely double like a Caucullata, and as large as the single flowers. It carries that peculiarity through its stolons into the young plants.

=

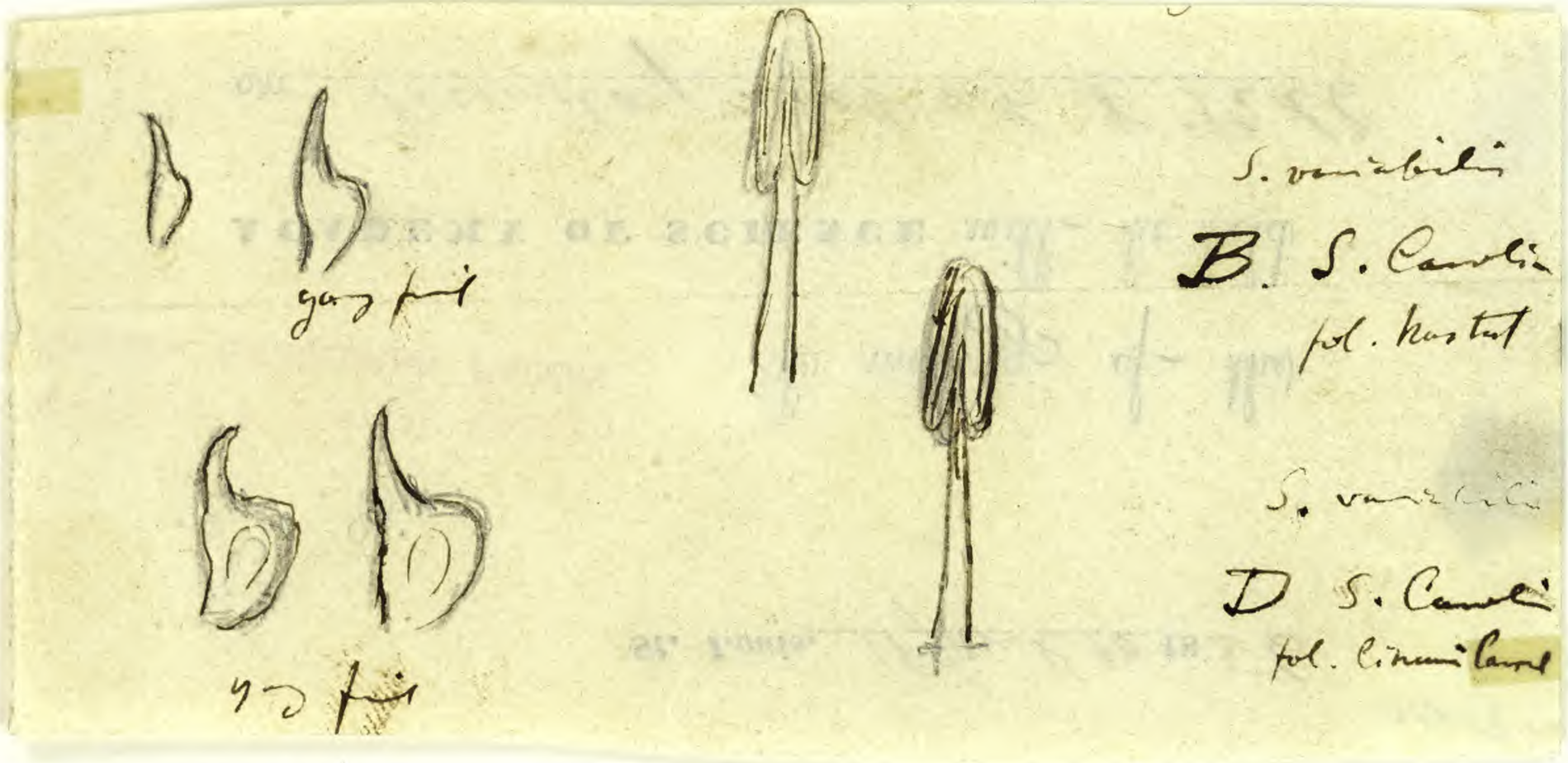
Th. S. Porter sends in Mar 1860 a similar monstrosity, & variability of pleno

10042

ALEX. LEITCH,

APOTHECARY & PHARMACEUTIST,

Marble Building Cor. Fourth & Olive Sts. St. Louis, Mo.



10043

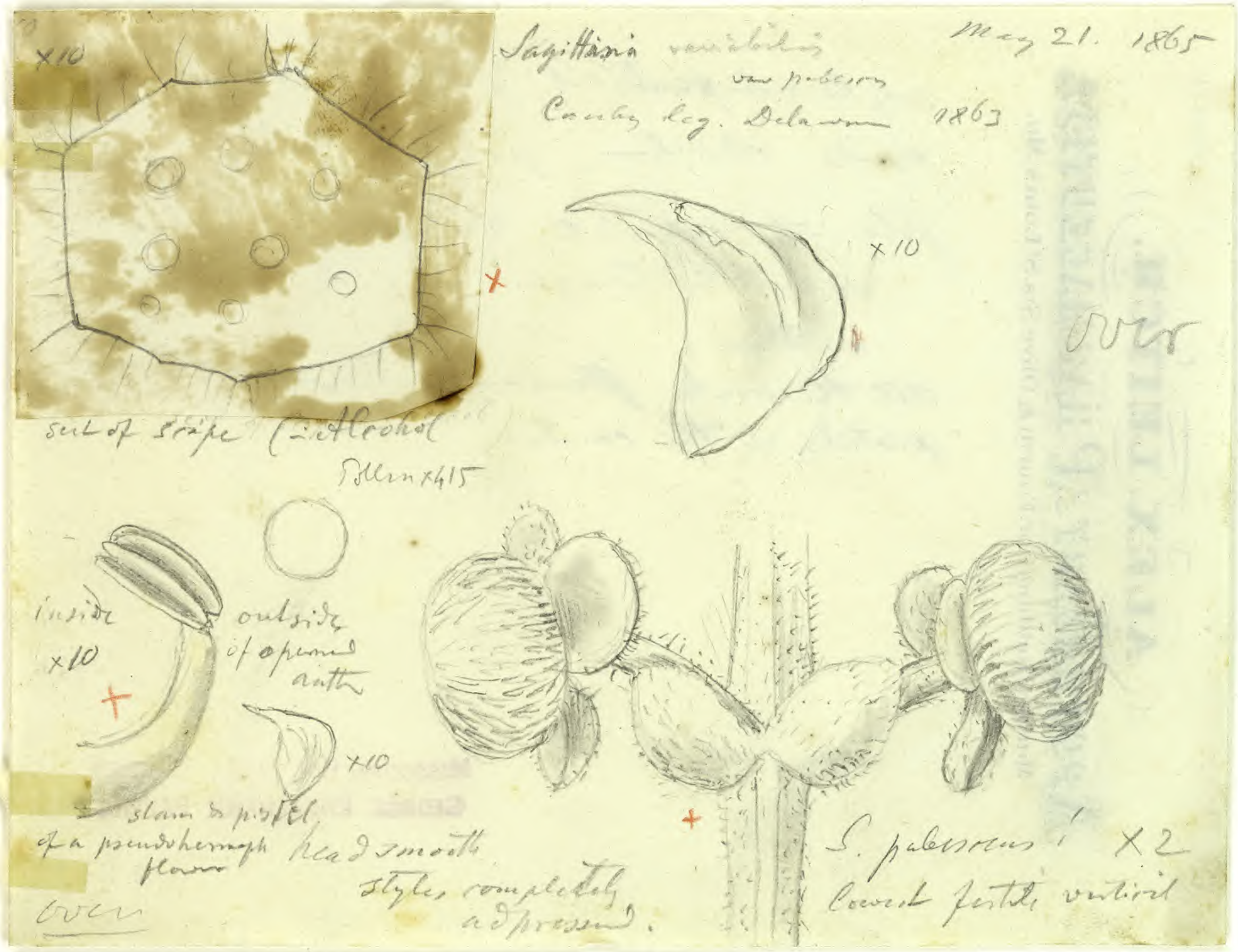
St. Louis, April 10 1856

Sir:

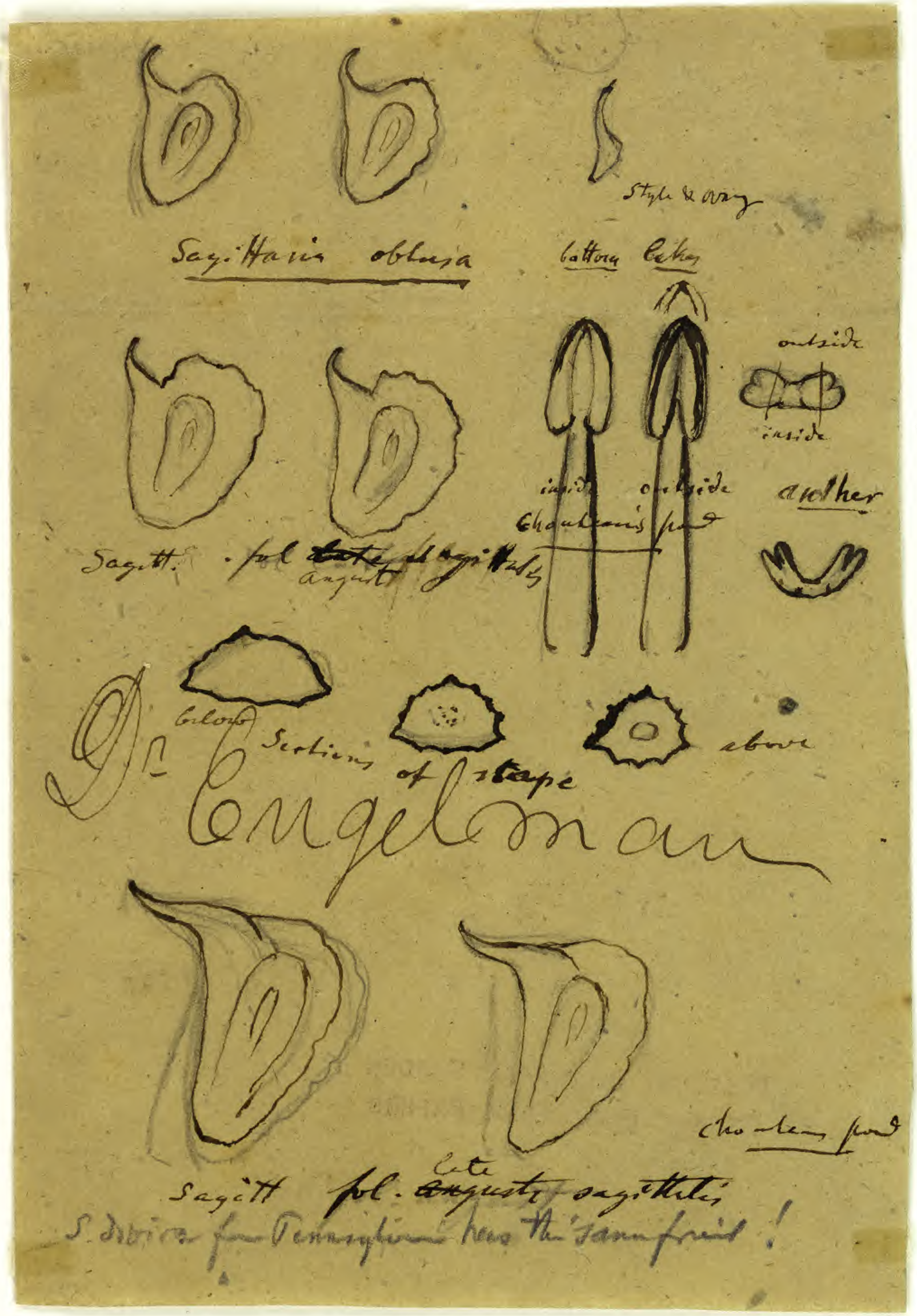
A meeting of the

ACADEMY OF SCIENCE will be held

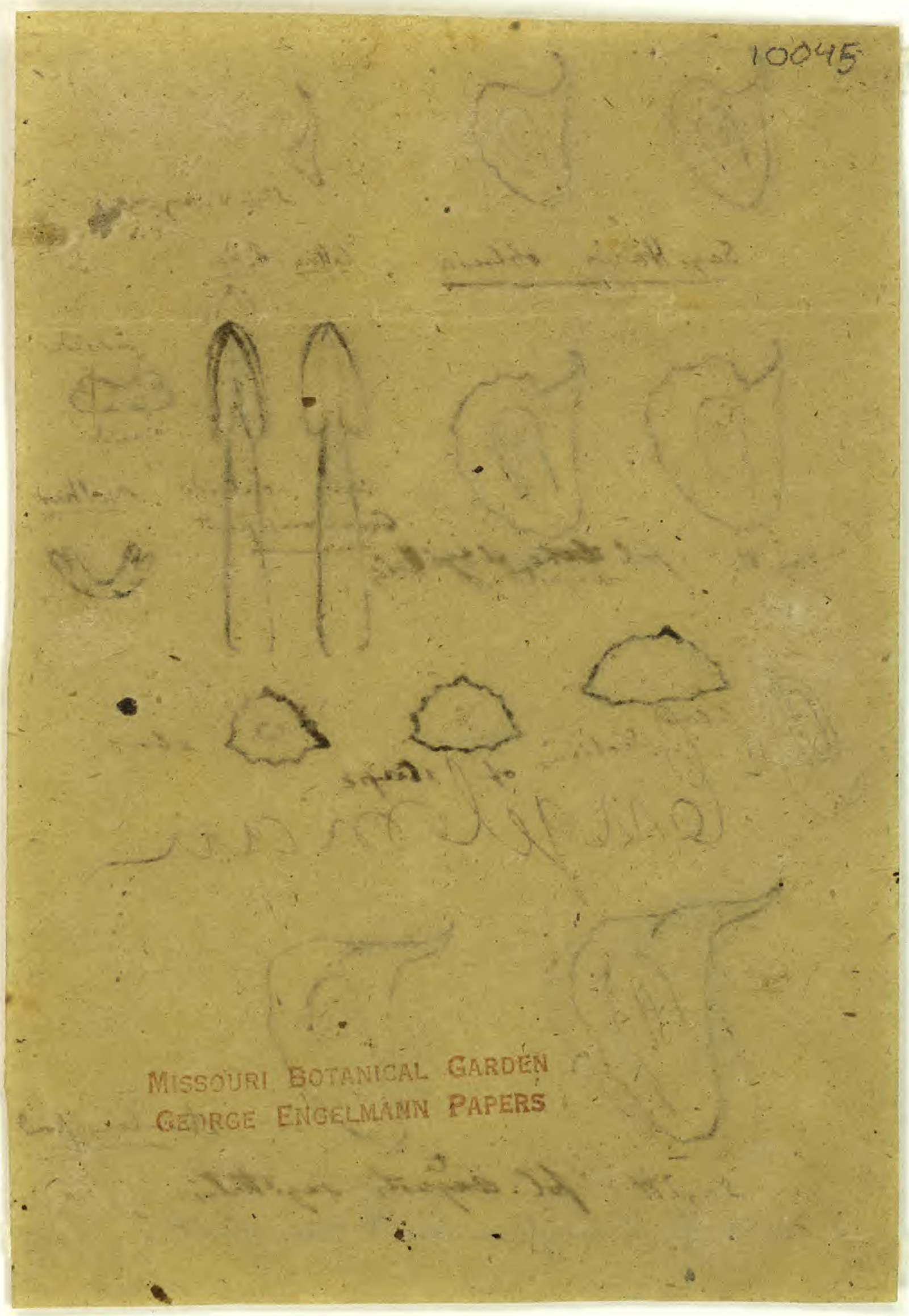
on Monday next at 8 P.M.



only lowest pentadil fertile
sepals obovular, petaloid
filaments subulate smooth, as long or
a little longer than the linear oblong
anthers.
all the male flowers seen have some
pistils, in the center

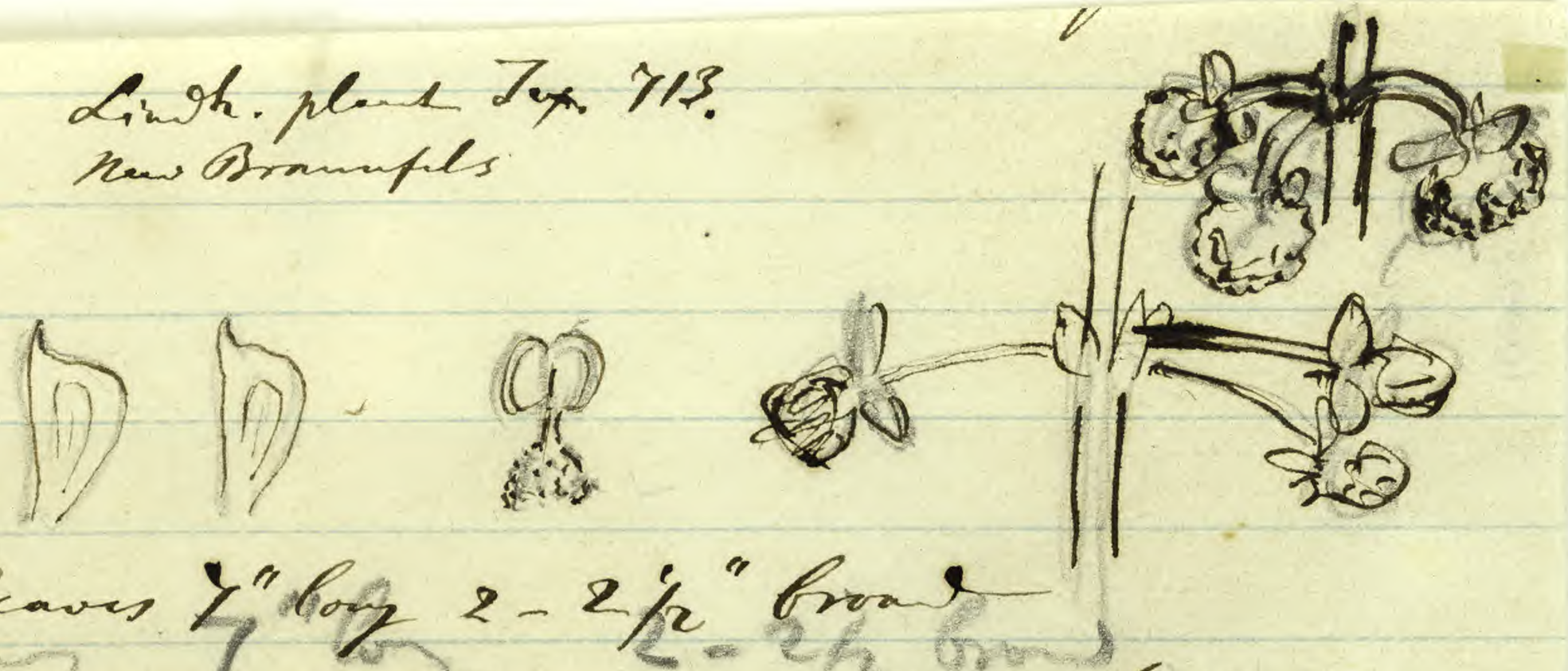


10045



10046

Lindh. plant Tex. 713.
New Braunfels



leaves 7" long 2 - 2½" broad
= Hale's "S. lanceolata" from Louisiana
= Hale's "S. lanceolata" from
a large form of S. simplex
Cambridge Octob 1856

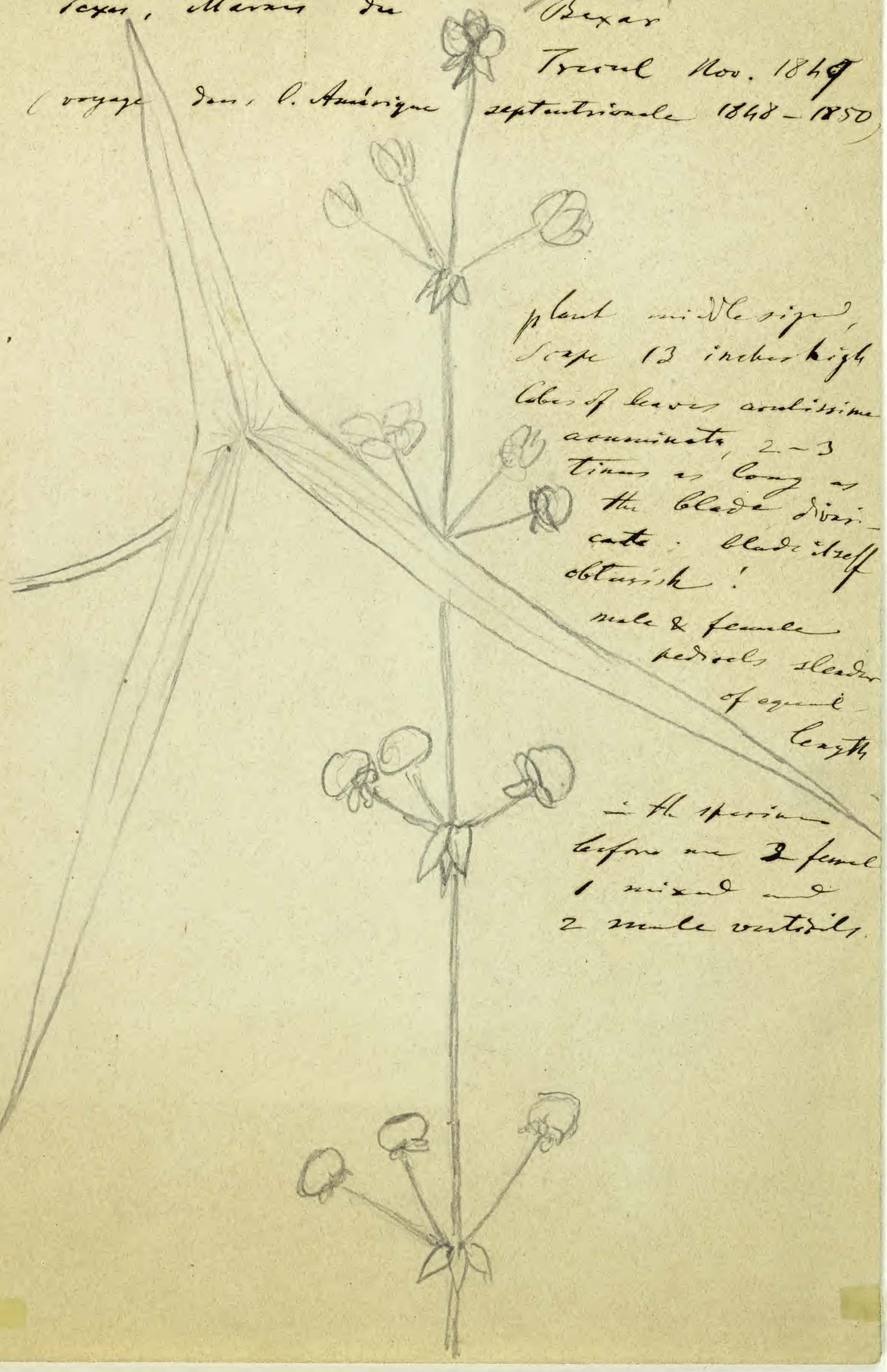
10047

1400. Sagittaria sagittifolia L. var gracilis

Texas, Marais du Bexar

Texas Nov. 1849

(voyage des C. Amérique septentrionale 1848–1850)



plant middle size, scape 13 inches high

Lobes of leaves acutissime acuminate, 2–3 times as long as the blade divaricate. blade itself obtusish!

male & female pedicels slender of equal length

in the specimen before me 2 female 1 mixed and 2 male verticils.

10048